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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,523	08/24/2001	John J. Grabowski	6683.64US01	2437
23552	7590	07/08/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			PRIDDY, MICHAEL B	
			ART UNIT	PAPER NUMBER
			3732	

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,523

Applicant(s)

GRABOWSKI ET AL.

Examiner

Michael B Priddy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-74 is/are pending in the application.
- 4a) Of the above claim(s) 9, 10, 15, 23-36, 39 and 43-69 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 40 and 70-74 is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 11-14, 16-22, 37, 41 and 42 is/are rejected.
- 7) ☒ Claim(s) 2, 8 and 38 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claim 5 refers to a ring around the arcuate outer surface of the screw head while there appears to be no reference thereto in the specification.

Claim Objections

Claim 5 is objected to because of the following informalities: in line 1, "4" should be --1--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-7, 11-14, 16-21, 37, 41 and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Lyons et al. (U.S. 6,413,259) with reference to Exhibit A. Lyons

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et al. teaches a bone fixation device 10 comprising: a bone plate 12 comprising-- a bone-contacting surface BS; an upper surface US opposite the bone-contacting surface BS; and one or more fastener-receiving apertures 16 extending through the plate 12 from the upper surface US to the bone-contacting surface BS, wherein the fastener-receiving aperture 16 comprises a frustoconical inner surface IS; one or more screws 14 having a head H with an arcuate outer surface OS; and one locking arrangement comprising a locking aperture 18 and locking element 22 having a locking cover LC and a threaded shaft TS configured to mate with a threaded interior TI of the locking aperture 18, wherein the one or more screws 14 are configured to be received within the one or more fastener-receiving apertures 16; wherein the arcuate outer surface contacts the frustoconical inner surface IS of the fastener-receiving aperture 16 during fixation of a bone with the device 10; wherein the frustoconical inner surface IS has a major opening MA including the frustoconical inner surface IS proximate the upper surface US of the plate and a minor opening MI proximate the bone-contacting surface BS; and wherein the locking element 22 is rotatable within the locking aperture 18, has an unlocked position that permits insertion of a screw 14 into the fastener-receiving aperture 16 and a locked position in which the locking cover LC at least partially obstructs the fastener-receiving aperture 16. Concerning the language of claim 5 requiring a ring around the arcuate outer surface of the screw head: in view of the objection to the specification set forth above, the Examiner has interpreted this limitation very broadly and believes that the top-most portion of the head of the fastener 14 of Lyons et al. defines a ring R.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons et al. in view of Michelson (U.S. 6,193,721). Lyons et al., as set forth above, teaches all of the limitations of the present invention except the plate is concave along a longitudinal axis and a transverse axis.

Michelson teaches an anterior cervical plating system 2 which, as shown in Figs. 3 & 4 and described in lines 30-67 of column 13, is concave along both its longitudinal axis and its transverse axis (referred to as bi-concave). Such a shape will conform more closely to the facing bone surface (lines 59-60 of column 13). It would have been obvious to one of ordinary skill in the art at the time of the present invention to form the bone plate of Lyons et al. such that it was concave along a longitudinal axis and a transverse axis to more closely conform to the facing bone surface of a vertebrae.

Response to Arguments

Applicant's arguments filed 04/08/2004 have been fully considered but they are not persuasive. With respect to claims 1, 22, 37, 41 and 42, Applicant has argued that Lyons does not disclose a fastener having an "arcuate outer surface" which Applicant defines as a curved surface having a radial arc. The Examiner maintains that Lyons et

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al. teaches a fastener having an "arcuate outer surface" in that the outer surface of the fastener 14 of Lyons et al. has an outer surface extending substantially along its longitude and having a radial arc in planes perpendicular to the longitude.

Allowable Subject Matter

Claims 2, 8, 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 40 and 70-74 are allowed.

Reasons for Allowance

None of the prior art of record teaches or fairly suggests a bone fixation device as set forth in claims 40, 70 or 74. Applicant has pointed out in the second paragraph of page 19 of the response filed 04/08/2004 that the fastener receiving apertures "of Vitro do not have a major opening proximate a upper surface and a minor opening proximate a bone-contacting surface. In contrast, a major opening or "wide lower region 28" (column 3, lines 40-45) is located proximate the bone-contacting surface, not the upper surface (see also Fig. 1C). Also, a minor opening 27, 29 is located proximate to the upper surface, not the bone-contacting surface."

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Priddy whose telephone number is (703) 308-8620. The examiner can normally be reached on Mon.-Fri. 8 a.m. - 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (703) 308-2582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael B. Priddy

Michael B. Priddy
July 2, 2004

Kevin Shaver
KEVIN SHAVER
SUPERVISORY PATENT EXAMINER
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